

CLAIM:

1. A method for radiographic examination comprising the steps of:
providing a source of xray radiation capable of generating radiation of
sufficient energy to image a tissue structure exposed to the radiation;
selecting a partially radiolucent, partially radiopaque marker having a
radiographic density and thickness which permit the marker to both cast a
radiographic shadow and transmit sufficient radiation to image anatomical detail
present in the tissue structure ^{of interest} when the marker and the tissue structure are exposed to
the xray radiation;
positioning the marker between the source of the xray radiation and the
tissue structure, and
exposing the marker and the tissue structure to the xray radiation to
generate a radiographic image of the tissue structure having the shadow of the marker
superimposed thereon, wherein anatomical detail present in the tissue structure is
clearly visible through the shadow of the marker.
2. The method of claim 1 wherein the step of selecting the marker is
further characterized in that the marker has a radiographic density and thickness
which permit the marker to absorb from about 2% to about 75% of the xray radiation.
3. The method of claim 1 wherein the step of providing a source of
xray radiation is further characterized in that the source is capable of generating xray
radiation having an energy in the range of from about 20 KV to about 40 KV, and the
step of selecting the marker is further characterized in that the marker has a
radiographic density and thickness which permit the marker to absorb form about 2%
to about 75% of said energy.

4. The method of claim 1 wherein the step of providing a source of xray radiation is further characterized in that the source is capable of generating xray radiation having an energy in the range of from about 40 KV to about 70 KV, and the step of selecting the marker is further characterized in that the marker has a radiographic density and thickness which permit the marker to absorb from about 2% to about 75% of said energy.

5. The method of claim 1 wherein the step of providing a source of xray radiation is further characterized in that the source is capable of generating xray radiation having an energy in the range of from about 70 KV to about 120 KV, and the step of selecting the marker is further characterized in that the marker has a radiographic density and thickness which permit the marker to absorb from about 2% to about 75% of said energy.

6. The method of claim 1 wherein the step of selecting the marker is further characterized in that the marker comprises a barium impregnated plastic.

7. The method of claim 3 wherein the step of selecting the marker is further characterized in that the marker comprises a material selected from the group consisting of rubber, plastic, aluminum and vinyl.

8. The method of claim 4 wherein the step of selecting the marker is further characterized in that the marker comprises plastic impregnated with 40% barium by weight.

a polymeric material

9. A method for radiographic examination comprising the steps of:
providing a source of xray radiation capable of generating radiation in
an energy range of from about 20 KV to about 120 KV to image a tissue structure
exposed to the radiation;

5 selecting a partially radiolucent, partially radiopaque marker having a
radiographic density and thickness which permit the marker to absorb from about 2%
to about 75% of the xray radiation, wherein the marker both casts a radiographic
shadow and transmits sufficient radiation to image anatomical detail present in the
tissue structure when the marker and the tissue structure are exposed to the xray
10 radiation;

positioning the marker between the source of the xray radiation and the
tissue structure, and

15 exposing the marker and the tissue structure to the xray radiation to
generate a radiographic image of the tissue structure having the shadow of the marker
superimposed thereon, wherein anatomical detail present in the tissue structure is
clearly visible through the shadow of the marker.

10. A system of radiographic markers for use in the radiographic
examination of tissue structures representing a range of tissue densities, said system
comprising a plurality of partially radiolucent, partially radiopaque markers, wherein at
least one of each of said markers comprising the plurality has a radiographic density
5 and thickness which permit the marker, upon exposure of the marker and an
underlying tissue structure to xray radiation of a specified energy, to both cast a
radiographic shadow and transmit sufficient radiation to image anatomical detail
present in the tissue structure underlying the marker.

11. The system of markers of claim 10 wherein each of the markers has a density and thickness which permit the marker to absorb from about 2% to about 75% of the xray radiation.

12. The system of markers of claim 10 including a plurality of barium impregnated plastic markers, wherein the density of each of said markers is determined by the amount of barium comprising said marker.

13. The system of claim 10 wherein the xray radiation has an energy of from about 20 KV to about 40 KV and the markers comprise materials selected from the group consisting of plastic, rubber, vinyl and aluminum.

14. The system of claim 10 wherein the xray radiation has an energy of from about 40 KV to about 70 KV and the markers comprise a plastic impregnated with 40% barium by weight.

15. A partially radiolucent, partially radiopaque marker for radiographic examination, said marker having a density and thickness such that upon exposure of the marker and an underlying tissue structure to xray radiation of specified energy, the marker casts a legible shadow on radiographic film without obscuring radiographic anatomical detail present in the underlying tissue structure.

16. The marker of claim 15 wherein the marker has a density and thickness which permit the marker to absorb from about 2% to about 75% of the xray radiation.

17. The marker of claim 15 wherein the xray radiation has an energy of from about 20 KV to about 40 KV and the marker comprises a material selected from the group consisting of plastic, rubber, vinyl and aluminum.

18. The marker of claim 17 wherein the marker comprises barium impregnated plastic.

19. The marker of claim 15 wherein the xray radiation has an energy of from about 40 KV to about 70 KV and the marker comprise a plastic impregnated with 40% barium by weight.

Add A17

Add C3

093/2835.081299